

549,386

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
18 November 2004 (18.11.2004)

PCT

(10) International Publication Number  
WO 2004/099324 A2

(51) International Patent Classification<sup>7</sup>: C09D 5/00,  
E01F 9/04, C08K 3/00

(21) International Application Number:  
PCT/US2004/009554

(22) International Filing Date: 29 March 2004 (29.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2003-107743 11 April 2003 (11.04.2003) JP

(71) Applicant: 3M INNOVATIVE PROPERTIES COM-  
PANY [US/US]; 3M Center, Post Office Box 33427, Saint  
Paul, MN 55133-3427 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): NAGAOKA,  
Yoshiyuki [JP/JP]; 4-26-4, Midori-cho, Yamagata, Yama-  
gata 990-2428 (JP). MIZUFUNE, Kanya [JP/JP]; 1-8-4,  
Higashihara-cho, Yamagata, Yamagata 990-0034 (JP).

(74) Agents: LILLY, James, V. et al.; Office of Intellectual  
Property Counsel, Post Office Box 33427, Saint Paul, MN  
55133-3427 (US).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-  
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,  
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,  
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished  
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: PAVEMENT MARKING MATERIAL

(57) Abstract: A marking material for use on a surface, the marking material including a binder material and a thermal-sensitive pigment. The marking material exhibits a first color different from a surface color. Upon being heated to a temperature of at least about 70°C, the marking material undergoes an irreversible color change from the first color to a second color. The second color renders the marking material effectively invisible to an observer. A marker and a method of using the marker are also disclosed.

WO 2004/099324 A2